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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/244,270 02/03/99 YUE

L M-7019-US

TM31/1107

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& FRIEL  
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EXAMINER

CHUNG, D

ART UNIT

PAPER NUMBER

2672

DATE MAILED:

11/07/00

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

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<b>Office Action Summary</b>	Application No. 09/244,270	Applicant(s) YUE ET AL.	
	Examiner Daniel J Chung	Art Unit 2672	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☐ All    b) ☐ Some    \* c) ☐ None of the CERTIFIED copies of the priority documents have been:
1. ☐ received.
2. ☐ received in Application No. (Series Code / Serial Number) \_\_\_\_.
3. ☐ received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

**Attachment(s)**

- |  |  |
|--|--|
| 15) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                     | 18) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 16) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 19) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 17) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.    | 20) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Drawings***

The drawings are objected to by the Draftperson as shown in the enclosed form PTO-948. Corrected drawings are required to be submitted.

### ***Specification***

Please review the application and correct all informalities.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakasu (5,831,634) in view of Duluk, Jr. (5,977,987).

Regarding claim 1, Wakasu discloses that the claimed feature of a method comprising:

Receiving, in a circuit, first, second and third vertex data corresponding to first, second and third vertices of a triangle (See Abstract, Fig 1, col 1 line 5-40, col 1 line 67-col 3 line 62, col 11 line 8-38, col 14 line 16-col 15 line 34)

Generating, in the circuit, region bits representing a location each of the first, second, and third vertices with respect to a tile being rendered (See Abstract, Fig 1, col 1 line 5-40, col 1 line 67-col 3 line 62, col 11 line 8-38, col 14 line 16-col 15 line 34)

Outputting coordinate data to a rasterizer, the coordinate data representing [an initial rasterization starting point estimate] based on the region bits. (See Abstract, Fig 1, col 1 line 5-40, col 1 line 67-col 3 line 62, col 11 line 8-38, col 14 line 16-col 15 line 34)

Wakasu does not specifically disclose that the estimated rasterization starting point. However, Duluk, Jr teaches that the method of finding the starting raster points by using the vertices of the polygon. (See col 11 line 33-col 14 line 30) The motivation would have been to decreasing a substantial time of the rasterization. (See col 1 line 49-52 in Wakasu) Therefore, it would have been obvious to one skilled in the art to incorporate the teaching of Duluk, Jr into the teaching of Wakasu.

Regarding claim 2, Wakasu discloses that generating, in the circuit, an [orientation bit] representing an orientation of a line connecting the first and second vertices with a line connecting the first and third vertices. (See Abstract, Fig 1, col 1 line 5-40, col 1 line 67-col 3 line 62, col 11 line 8-38, col 14 line 16-col 15 line 34)

The combination of Wakasu and Duluk, Jr do not explicitly disclose that representation of orientation bit. However, Examiner take Official Notice that orientation bit is a well known art to represent the x-y coordinate data of each vertex in different coordinate system with easy manner. Therefore, it would have been obvious to one skilled in the art to have orientation bit into the teaching of Wakasu.

Regarding claim 3, Wakasu discloses that sorting the first, second and third vertices according to a position in a predetermined direction. (See Abstract, Fig 1, col 1 line 5-40, col 1 line 67-col 3 line 62, col 11 line 8-38, col 14 line 16-col 15 line 34)

Regarding claims 4 and 5, claims 4 and 5 are similar in scope to the claims 1 and 2, and thus the rejections to claims 1 and 2 hereinabove are also applicable to claims 4 and 5.

Regarding claim 6, refer to the discussion for the claim 1 hereinabove, Duluk, Jr further discloses that a rasterizer configured to receive the initial rasterization starting point estimation circuit coordinates. (See col 11 line 33-col 14 line 30)

**Conclusion**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Any response to this action should be mailed to:

Commissioner of Patents and Trademarks  
Washington, D.C. 20231

or faxed to:

(703) 308-9051, (for formal communications intended for entry)

Or:

(703) 308-6606 (for informal or draft communications, please label "PROPOSED" or "DRAFT").

Hand-delivered responses should be brought to Crystal Park II, 2021 Crystal Drive, Arlington, VA., Sixth Floor (Receptionist).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Chung whose telephone number is (703) 306-3419. He can normally be reached Monday-Thursday and alternate Fridays from 7:30am - 5:00pm. If attempts to reach the examiner are unsuccessful, the examiner's supervisor, Michael, Razavi can be reached on (703) 305-4713. Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

djc  
October 31, 2000



**MATTHEW LUU  
PRIMARY EXAMINER**